REMARKS

Claims 1, 3-17, and 19-20 remain pending. Claims 2 and 18 are cancelled. Claims 1, 8, 14, and 19-20 are amended herein. No new matter is added as a result of the claim amendments.

35 U.S.C. § 103 Rejections

Claims 1-20 are rejected under 35 U.S.C. § 103 as being unpatentable over Anderson (U.S. Patent No. 5,992,041), hereinafter referred to as "Anderson." The rejection states that it would have been obvious to integrate known external GPS test functions within a conventional GPS receiver so as to receive the expected benefits derived there from such as ease of use and enhanced system flexibility absent a showing of unexpected results or synergistic effect from any particular claimed combination.

The Applicants respectfully submit that the integration of the GPS test functions, as recited in Claims 1-20 of the present invention do result in an advantageously synergistic effect that is neither taught nor suggested by Anderson. For example, Anderson generally describes equipment used to test a navigation system prior to installing it in a vehicle. Importantly, Anderson does not teach or suggest that the test equipment is operable for verifying that the navigation system is performing properly after it has been installed in a vehicle. Accordingly, the Applicants respectfully submit that Anderson does not teach or suggest a need or advantage to integrating the test functionality into the navigation system being tested.

As described in the instant application, embodiments of the present invention are operable to detect when a GPS-based aircraft navigation system is operating in a defective fashion in which potentially hazardous and misleading information may be provided to a pilot. More specifically, embodiments of the present invention may perform a power-up built-in test (BIT), an on demand BIT, or a continuous BIT which is practiced during normal operation of the GPS receiver. This is advantageous because defective operation of the navigation system can be detected each time the system is powered up, when defective operation is suspected, or to constantly monitor the operating navigation system. This functionality is particularly important in aircraft navigation systems where misleading navigation information could result in aircraft crashes or forced landings in dangerous conditions. As a result, the Applicants respectfully submit that integrating test functionality in an aircraft-based GPS navigation system is particularly advantageous. Again, the Applicants respectfully submit that none of these advantages are taught or suggested by Anderson. Thus, the Applicants respectfully submit that the pre-installation testing of a vehicular navigation system as taught by Anderson does not anticipate the advantages of integrating GPS test functions as recited in Claims 1-20 of the present invention.

Claim 1 of the present invention recites:

> a system processor;
> a radio frequency (RF) input coupled to said system processor by a first operational signal path; and
> a loop forward built-in test equipment (BITE) coupled to said system processor and to said RF input for providing an RF test signal to said RF input;
> a data output port coupled to said system processor by a second operational signal path; and
> a loop backward built-in test equipment (BITE) coupled to said system processor and to said data output port for providing sampled output data to said system processor.

Claim 8 recites similar claim limitations. As discussed above, the Applicants respectfully submit that Anderson does not teach or suggest built-in test equipment of any sort. Additionally, the Applicants respectfully submit that Anderson does not teach or suggest a loop forward built-in test equipment (BITE) coupled with a processor and with a radio frequency input for providing an RF test signal to the RF input as recited in Claims 1 and 8 of the present invention. Similarly, the Applicants respectfully submit that Anderson does not teach or suggest a loop backward built-in test equipment (BITE) coupled to the system processor and to a data output port for providing sampled output data to the system processor as recited in Claims 1 and 8 of the present invention.

The Applicants respectfully submit that Anderson does not teach or suggest the functionality of the loop forward and loop backward built-in test equipment as recited in Claims 1 and 8 of the present invention. For example, the loop forward BITE 340 allows the processor 325 to determine if errors are being generated by analog processing block 308 and/or digital signal processor 320. Similarly, the loop backward BITE 345 allows the processor 325 to determine if errors are being generated by I/O block 330. The Applicants respectfully submit that this level of error detection is neither taught nor suggested by Anderson. Accordingly. the Applicants respectfully submit that rejection of Claims 1 and 8 under 35 U.S.C. § 103 is overcome.

Claims 3-7 depend from Claim 1 and recite additional limitations descriptive of embodiments of the present invention. Accordingly. the Applicants respectfully submit that rejections of Claims 3-7 under 35 U.S.C. § 103 are also overcome.

Claims 9-13 depend from Claim 8 and recite additional limitations descriptive of embodiments of the present invention. Accordingly. the Applicants respectfully submit that rejections of Claims 8-13 under 35 U.S.C. § 103 are also overcome.

Claim 14 of the present invention recites a method for performing built-in test (BIT) of a GPS receiver comprising:

> generating a test data message within said GPS receiver;
> generating a first RF carrier within said GPS receiver;
> modulating said first RF carrier with said test data message to produce a first RF test signal;
> coupling said first RF test signal to an RF input of said GPS receiver;
> providing positioning data to an input/output (I/O) block for formatting;
> transmitting the positioning data over an output data port;
> sampling the transmitted positioning data at said output data port; and
> comparing the transmitted data to the positioning data provided to the I/O block.

The Applicants respectfully submit that Anderson does not teach or suggest the above recited claim limitations. Instead, Anderson merely states that the output from the navigation system under test (e.g., 52) is monitored to determine the navigation system's ability to correctly navigate the simulated test drive (column 5, lines 24-30). More specifically, Anderson does not teach or suggest modulating a first RF carrier with a test data message to produce a first RF test signal as recited in Claim 14 of the present invention. Nor does Anderson teach or suggest comparing transmitted data to the positioning data provided to and I/O block as recited in Claim 14 of the present invention. Accordingly. the Applicants respectfully submit that rejection of Claim 14 under 35 U.S.C. § 103 is overcome.

Claims 15-17 and 19-20 depend from Claim 14 and recite additional limitations descriptive of embodiments of the present invention. Accordingly. the Applicants respectfully submit that rejections of Claims 15-17 and 19-20 under 35 U.S.C. § 103 are also overcome.

CONCLUSION

Based on the arguments presented above, the Applicants respectfully assert that Claims 1, 3-17, and 19-20 overcome the rejections of record and, therefore, the Applicants respectfully solicit allowance of these Claims.

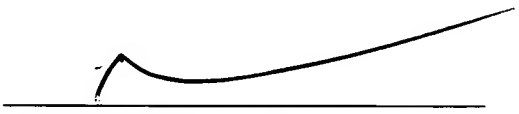
The Applicants have reviewed the references cited but not relied upon. The Applicants did not find the reference to show or suggest the present claimed invention of single piece three dimensional bezel-less top cover which encloses an electronic device: U.S. Patent No. 6,114,989, U.S. Patent No. 6,466,846, U.S. Patent No. 6,760,582, U.S. Patent No. 6,782,330, U.S. Pub. No. 2004/0093135.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

WAGNER, MURABITO & HAO LLP

Date: 9/22/05



John P. Wagner, Jr.
Reg. No. 35,398

Two North Market Street
Third Floor
San Jose, California 95113
(408) 938-9060